comprising the sulfated polysaccharide recited in claim 1. Accordingly, a case of anticipation is not established.

The present invention is directed to an anti-coagulant composition which comprises a sulfated polysaccharide of certain defined characteristics. See claim 1. Miyamoto et al. does not anywhere mention an anti-coagulant composition but only refers to sulfated gellan. Therefore applicants submit that Miyamoto et al. does not describe this element of claim 1.

Furthermore, the EDA(+)FN disclosed by Miyamoto et al. is a glycoprotein which is composed of D-glucosamine, D-glucuronic acid, and L-iduronic acid. The polysaccharide used in the present invention comprises units of glucose, glucuronic acid, and rhamnose. See claim 1. The polysaccharide used in the present invention is therefore not expressly or inherently described by Miyamoto et al. Accordingly Miyamoto et al. does not disclose each and every limitation of the present claims, and applicants respectfully submit that this rejection should be withdrawn.

Applicants also argued in the last response that claim 1 is directed to a polysaccharide that is hydrolyzed before it is sulfated and that Miyamoto et al. does not disclose a polysaccharide that is hydrolyzed. See Reply filed August 6, 2007, pages 4-5, bridge paragraph. The Examiner agrees in the outstanding Office Action that Miyamoto et al. does not disclose a polysaccharide that is subjected to hydrolysis. See Office Action, page 6. However the Examiner asserts that the patentablity of a product in a product by process claim depends on the product and that the molecular weight of the Miyamoto et al. gellan "very likely" corresponds with the hydrolysis product recited in claim 1. The Examiner thus concludes that the product disclosed by Miyamoto et al. anticipates the product of claim 1.

However applicants respectfully submit that the presently claimed process steps impart distinctive structural characteristics to the sulfated polysaccharide product. The MPEP states as follows:

> The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would

be expected to impart distinctive structural characteristics to the final product. (Emphasis added.) MPEP §2113 (case law citations omitted).

In fact, hydrolysis is a well known process that one of skill in the art would expect to impart distinctive structural characteristics to the hydrolyzed polysaccharide. For example, a hydrolyzed polysaccharide would generally have a lower molecular weight when compared with a polysaccharide that has not been subjected to hydrolysis. Miyamoto et al. does not mention hydrolysis and therefore the Miyamoto et al. gellan would not be expected to possess the distinctive structural characteristics of the presently claimed polysaccharide product. Applicants respectfully submit that it is well established that when a reference is silent about an asserted characteristic, the Examiner bears the burden of presenting evidence that makes clear that "the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." (Emphasis added) MPEP §2131.01, citing *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Applicants respectfully submit that the Examiner has not properly established that the presently claimed hydrolyzed product necessarily contains the distinctive structural characteristics imparted by the claimed hydrolysis step. Accordingly, a case of anticipation is not established for claims 1-4 and this rejection should be withdrawn.

Claim Rejections - 35 U.S.C. §103

Claims 5-7, 9 and 10 are rejected under 35 U.S.C. §103 as being unpatentable over Miyamoto et al. Applicants respectfully traverse this rejection for the following reasons.

In order to establish a case of *prima facie* obviousness, the Examiner must articulate a finding that the prior art included each element claimed. See MPEP §2143. As described above, the prior art does not disclose or suggest a polysaccharide comprising units of glucose, glucuronic acid and rhamnose. Therefore, each element of the presently claimed invention is not

disclosed or suggested by the prior art and a case of *prima facie* obviousness has not been established. Applicants submit that this rejection should be withdrawn.

As mentioned above, the EDA(+)FN disclosed by Miyamoto et al. is a glycoprotein that is composed of D-glucosamine, D-glucuronic acid and L-iduronic acid. On the other hand, the polysaccharide recited in the present claims comprises units of glucose, glucuronic acid and rhamnose. See claim 1. Applicants further note that EDA(+)FN is believed to be a cause of rheumatoid arthritis and does not relate to blood coagulation. EDA(+)FN has the drawbacks of containing virus or prion proteins, and also has a high cost of preparation. In contrast, the polysaccharide used in the present invention is safe and inexpensive. The polysaccharide used in the present invention is therefore not suggested by Miyamoto et al.

Accordingly, applicants respectfully submit that the prior art does not suggest each element of claims 5-7, 9 and 10. Applicants respectfully submit that the Examiner has therefore not established a case of *prima facie* obviousness, and that this rejection should be withdrawn.

Conclusion

In view of the foregoing remarks, it is submitted that each ground of rejection set forth by the Examiner has been overcome, and that this application is in condition for allowance. An early reconsideration and Notice of Allowance is respectfully requested.

Respectfully submitted,

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